

Work Order ID 52860



Page 1

October 15, 2009 3:48:22 PM

Item ID: D407-667-105

Accept



Setup Start



Revision ID: C

Stop



Item Name: Crosstube Fwd

Start Date: 16/10/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 05/11/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals:

Process Plan: *BP*

Date: *09-10-15*

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D407-667-145

Rev C

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile and create labels as per PPP D407-667-105 CHG003

for BG 09/11/11

110

0.00



Packaging

Packaging

Memo

0.00

Packaging

9/11/11 54

120

0.00



BENDING MACHINE - CROSSTUBES

CNC Bend 2

Memo

0.00

CNC Alpha 160 Bender

Bend tube as per Dwg D407-667-145 using CNC bender program 407-fw and Folio FT016

(14) MB 09-11-02

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Item ID: D407-667-105

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Item Name: Crosstube Fwd

Start Date: 16/10/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 05/11/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 	QC15- Crosstube Dimensional Check	0.00							
QC Quality Control	Memo	0.00							
140 	Crosstubes	0.00							
Crosstubes	Memo	0.00							
Crosstubes	1- scribe batch # inside of cuff 2-Drill pilot holes in tube using drill Jig DT8541 & DT8542 as per Dwg D407-667-145. Drill all (3) top holes. 3-Drill and Ream all holes in tube to finish size using drill Jig DT8541 & DT8542 as per Dwg D407-667-145 Check								
150 	Crosstubes Chemical Conversion	0.00							
HandFXtube	Memo	0.00							
Hand Finishing Crosstubes									

CP 09.11.02

MD 09-11-03

IX

Q

- HWM 9-11-3

Work Order ID 52860

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Start Date: 16/10/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 05/11/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

160

QC3- Inspect Part Finish

0.00

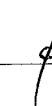


⇒ 8 Oct 10 4

QC

Memo

0.00



Quality Control

170

QC5- Inspect part completeness to step on W/O

0.00

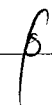


⇒ 8 Oct 10 4

QC

Memo

0.00



Quality Control

180

Outsource process - NDT per QSI038 4.1

0.00



0.00

Outsource2

Memo

Outsource process - NDT

Liquid Penetrant Inspection as per QSI 038 Or ☐ Issue P/O 10719 LPI as per ASTM 1417 ☐ Level 2 Attach copy of NDT results to work order

CL

RL 09-11-5

Work Order ID 52860



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October 15, 2009 3:48:22 PM

Item ID: D407-667-105

Accept



Setup Start



Revision ID: C

Stop



Item Name: Crosstube Fwd

Start Date: 16/10/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 05/11/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

190

0.00



Packaging

Packaging

Memo

0.00

Packaging

Inspect for transit damage ☐ Ensure copy of NDT results attached to work order.

16/11/05 ①

200

0.00



QC6- Inspect dimensions to drawing

QC

Memo

0.00

Quality Control

Inspect for damage & ensure results are as per Dwg D206-667-145

RT 09-11-06

210

0.00



SprayPaint

SprayPaint

Memo

0.00

Spray Painting

1-Prime inside and outside crosstube as per QSI 005 4.2 ☐ 2-Paint outside crosstube with White Imron as per QSI 005 4.2 ☐ PRIME: ☐ Start Time: 6:00 ☐ Finish Time: 7:00 ☐ PAINT: ☐ Start Time: 10:00 ☐ Finish Time: 11:00

RT 09-11-06

Work Order ID 52860

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Item ID: D407-667-105

Accept



Setup Start



Revision ID: C

Stop



Item Name: Crosstube Fwd

Start Date: 16/10/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 05/11/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

220 QC14- Inspect Spray Paint

0.00



QC

Memo

0.00

Quality Control

Then, Wrap in plastic bag to protect from scratches

ml 09 11 09 ①

230

0.00



Crosstubes

Crosstubes

Memo

0.00

Crosstubes

1-Install support using 0.03" to 0.06" thick layer of magnobond 6398 per QSI 015. Let cure for 12h after installation and prior to packaging. Note (3) top holes should be facing up. □ A/R Magnobond 6398 : 112417 exp 01/2011
Torque clamps to 80-100 in lb □ 3 ml 09 11 10

ml 09 11 09 ①

240

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

1 09-11-11

Work Order ID 52860

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Item ID: D407-667-105

Accept



Setup Start



Revision ID: C

Stop



Item Name: Crosstube Fwd

Start Date: 16/10/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 05/11/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

250	Pick Kit	0.00							
Packaging	Memo	0.00							
Packaging									

9/11/11

260	QC4- 100% Inspect kits for completeness	0.00							
QC	Memo	0.00							
Quality Control									

09/11/11

1

270	Packaging	0.00							
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D407-667-105								
	Location: _____								
	PPP Rev:								

9/11/11

Work Order ID 52860

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Item ID: D407-667-105

Accept



Setup Start



Revision ID: C

Stop



Item Name: Crosstube Fwd

Start Date: 16/10/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 05/11/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

280

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

09/11/11

MF 09-11-11

Picklist Print

October 15, 2009 3:48:26 PM

Page 1

Work Order ID: 52860

Parent Item: D407-667-105RevC

Parent Item Name: Crosstube Fwd


Comments:

Start Date: 16/10/2009

Required Date: 05/11/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN960JD516 ⁺		Purchased	No			100	Each	1,706.000	18.0000			
												
Washer												

9/11/11 SP

48

Warehouse	Loc Qty	Loc Code
Location		
Main Warehouse		
ST	1706	
100564	2	
106167	6	
107534	34	
107959	43	
108246	46	
108672	2	
109059	49	
109752	22	
110363	46	
110523	57	
111279	39	
112082	68	
112314	500	
112794	292	
112828	500	

18 SD

Rubber Cushion

D3595-063-395 B# 44667 ml 09 11 09

Picklist Print

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Work Order ID: 52860



Parent Item: D407-667-105RevC



Parent Item Name: Crosstube Fwd

Start Date: 16/10/2009

Required Date: 05/11/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2873-043RevA		Manufactured	No			230	Each	53.0000	2.0000			

Nut Plate Assembly

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	53	
45370	18	
45422	15	
50002	20	

ml 02 11 10

D2873-045RevA Manufactured No

230 Each 71.0000 2.0000



Nut Plate Assembly

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	71	
45210	11	
46772	20	
50001	40	

ml 02 11 10

Picklist Print

Page 3

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Work Order ID: 52860

Parent Item: D407-667-105RevC

Parent Item Name: Crosstube Fwd

Start Date: 16/10/2009

Required Date: 05/11/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2891-1RevA1		Manufactured	No			230	Each	81.0000	2.0000			

2.25 Support

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	81	
40336	1	
41198	16	
43880	20	
45935	4	
46159	20	
50952	20	

MA 09-11-09

D407-667-105TRNRevC

Manufactured No



Crosstube Turning Detail

230 Each 2.0000 1.0000

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
LG	2	
48465	1	
50588	1	

TK MB 09-11-02 ✓

Picklist Print

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Work Order ID: 52860

Parent Item: D407-667-105RevC

Parent Item Name: Crosstube Fwd

Comments:

Start Date: 16/10/2009

Required Date: 05/11/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Loc Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	-----------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

MS21920-20		Purchased	No			230	Each	167.3000	4.0000			
------------	--	-----------	----	--	--	-----	------	----------	--------	--	--	--



Clamp (per MIL-DTL-8783C)

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

167.3

103478

2

106484

12

109269

9.3

110536

10

111281

34

112307

50

112624

39

112793

11

10/09/11/09

ANS-10A

Purchased

No

260

Each

147.0000

10.0000



Bolt

9/11/11 \$

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

147

107013

8

110363

2

111819

20

112314

50

112385

50

112805

17

10x50

October 15, 2009 3:48:27 PM

Shop Packet Print

Page 4

Picklist Print

October 15, 2009 3:48:27 PM

Work Order ID: 52860



Parent Item: D407-667-105RevC



Parent Item Name: Crosstube Fwd

Start Date: 16/10/2009

Required Date: 05/11/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN5-30A		Purchased	No			260	Each	77.0000	4.0000			
											9/11/11	SO

BOLT

SB

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

77

110467

77

4x50

- AN5-32A

Purchased

No

260

Each

113.0000

4.0000



Bolt



9/11/11

SO

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

113

106242

3

106519

4

110363

17

112082

39

112805

50

4x50

Picklist Print

October 15, 2009 3:48:27 PM

Work Order ID: 52860

Parent Item: D407-667-105RevC

Parent Item Name: Crosstube Fwd


Start Date: 16/10/2009

Required Date: 05/11/2009

Start Qty: 1.00

Required Qty: 1.00

Comments:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS20601-AD4W10		Purchased	No			260	Each	241.0000	14.0000			
												
RIVET												

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	241	
110665	100	
111177	141	

nl 09 11 10

MS21042L5

Purchased

No

260

Each

1,118.000 4.0000



Nut

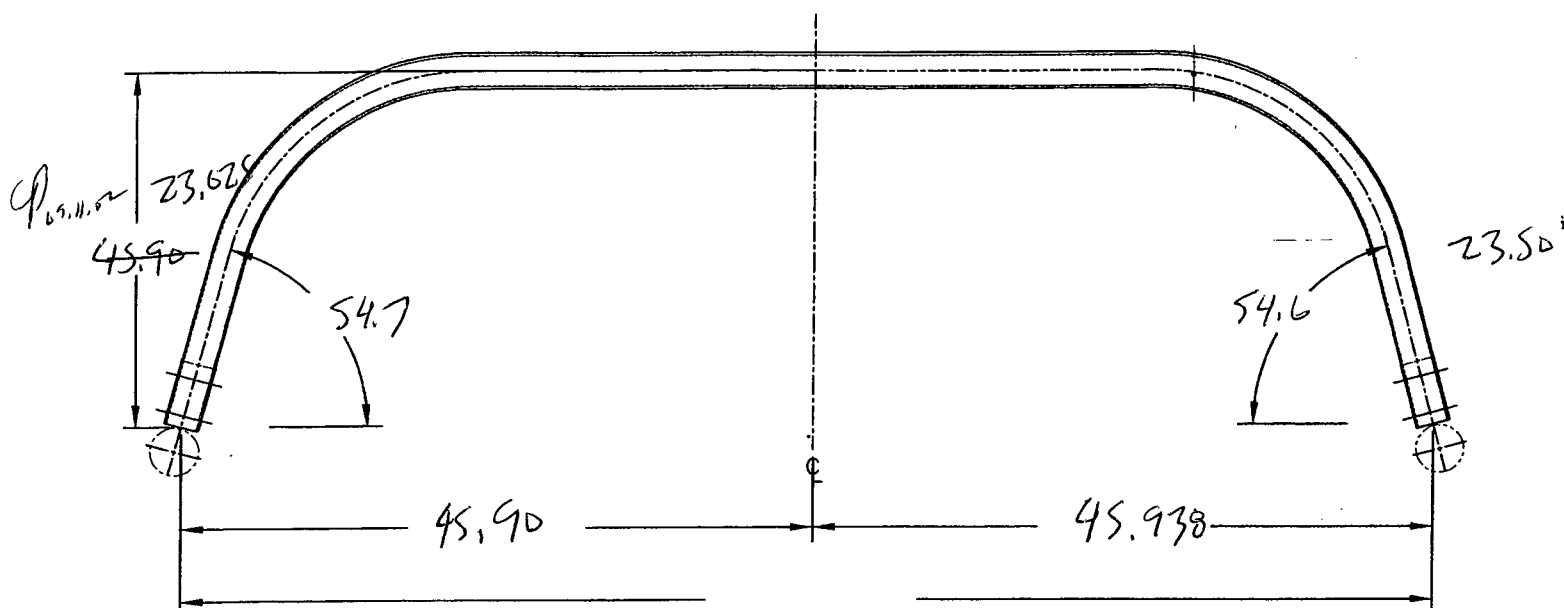
<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	1118	
110382	10	
111127	4	
111636	104	
112314	1000	

9/11/11 SP

4x50

DART AEROSPACE LTD		Work Order:	52860
Description: Crosstube High Fwd (407) <i>B</i>		Part Number:	D407-667-105
Inspection Dwg: D407-667-145 Rev: <i>B C</i>		Page 1 of 1	

Required Dimension	Min	Max
Height	23.48	23.60
1/2 Span	45.88	46.0
Angle	54	56
Total Span	91.76	92.0



Comments

QC15 Inspection	<i>CP</i>
Date	05.11.02

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	

Item	Qty -145	Part Number	Description
1	X	D407-667-145	CROSSTUBE ASSEMBLY (407 HIGH FWD)
2	1	D6010-115	CROSSTUBE
3	2	D2873-043	NUT PLATE
4	2	D2873-045	NUT PLATE
5	2	D2891-1	SUPPORT
6	4	D3595-063-395	RUBBER CUSHION
7	4	MS21920-20	CLAMP (OR MS21920-21)
8	14	MS20601AD4W10	RIVET (OR NAS9302B-4-10)
9	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299- 947-100, TYPE II, CLASS 2 ADHESIVE)

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RETURN TO
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UNCONTROLLED COPY
SUBJECT TO AMENDMENTS
WITHOUT NOTICE
WORK ORDER
NO. 52840
BS 09-10-15

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6010-115
FINISHED LENGTH = 113.20±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D407-667-145" AND BATCH NUMBER ON
INSIDE OF CUFF USING VIBRATING STYLUS.
- 7) WEIGHT: 17.8 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY,
TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 6 PASSES. MAXIMUM TUBE FLATTENING DUE
TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2891-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER
QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-20 CLAMPS (OR -21) WITH D3595-063-395 RUBBER CUSHIONS TO SECURE
THE D2891-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMP MECHANISMS
ARE LOCATED ON CROSSTUBE SUPPORTS.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE
OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS
SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT
LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN
SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

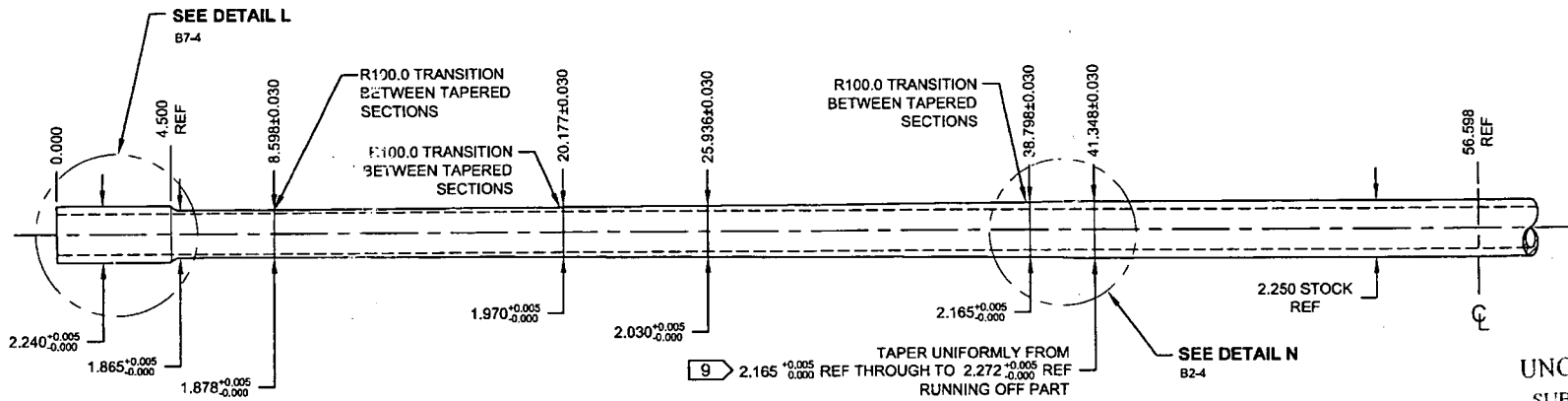
RELEASED
03/11/12

C	REVISE GENERAL NOTES/PART LIST (ZN D7-1); REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS. D3595-063-395 WAS D2856-400-694 (ZN D6-2 & A5-2); REMOVED REF. 7 ADD TOLERANCES (ZN C6-3, C4-3, D2-3); RELOCATED FLAG #6 (ZN A8-3) PER NCR 210; MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4.	RF	08.11.06
B	ADD HOLES AND NUT PLATES FOR COMPATABILITY WITH BHT/AA SKUDTUBES	PH	05.07.26
A	NEW ISSUE	CP	02.05.08
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	RF	DRAWING NO.	REV. C
MFG. APPR.	RF	D407-667-145	SHEET 1 OF 4
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	CROSSTUBE ASS'Y (407 HIGH FWD)	NTS
DATE	08.11.06	COPYRIGHT © 2002 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



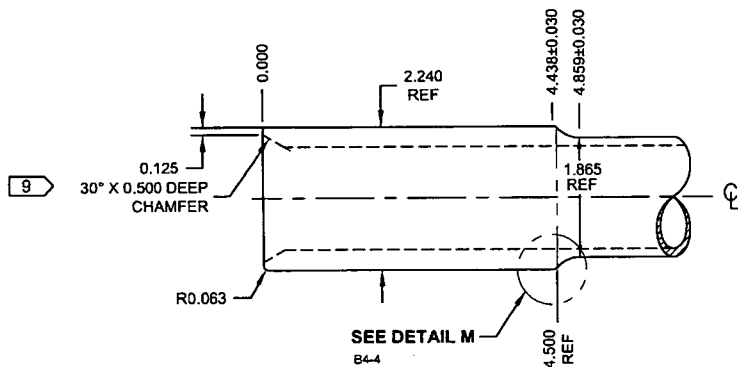
RELEASE
04/11/12 MJD

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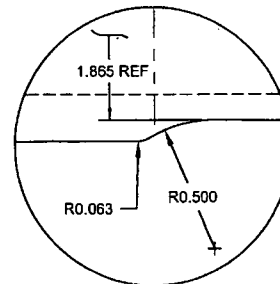


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SUBJECT TO APPROVAL
WITHOUT THE
WORK ORDER
NO. 52860

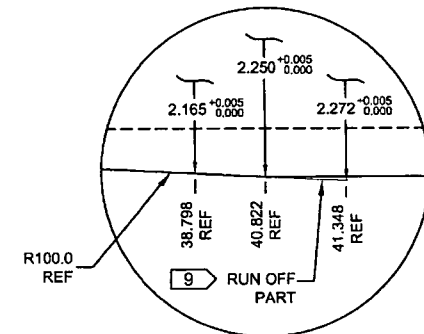
TURNING DETAIL



DETAIL L:
D7-4 **CROSSTUBE CUFF**
NOT TO SCALE



DETAIL M:
B6-4 **CUFF TRANSITION**
NOT TO SCALE



DETAIL N:
C3-4 **TAPER RUN-OFF**
NOT TO SCALE

RELEASED
08/11/06

DESIGN	9	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D407-667-145	SHEET 4 OF 4
APPROVED		TITLE	SCALE
DE APPR.		CROSSTUBE ASS'Y (407 HIGH FWD)	NTS
DATE	08.11.06	<small>COPYRIGHT © 2002 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

32.8 PARTS LIST

Item	Qty -011	Qty -013	Qty -015	Qty -101	Qty -201	Qty -103	Qty -203	Qty -105	Qty -205	Part Number	Description
	X									D206-667-011	SPACER BLOCK KIT
		X								D206-667-013	NUT PLATE KIT (-101/-103/-105/-203/-205)
			X							D206-667-015	NUT PLATE KIT (-201)
				X						D206-667-101	CROSSTUBE INSTALLATION, 206A/B HIGH FWD
					X					D206-667-201	CROSSTUBE INSTALLATION, 206A/B HIGH AFT
						X				D206-667-103	CROSSTUBE INSTALLATION, 206L/L-1/L-3/L-4 HIGH FWD
							X			D206-667-203	CROSSTUBE INSTALLATION, 206L/L-1/L-3/L-4 HIGH AFT
								X		D407-667-105	CROSSTUBE INSTALLATION, 407 HIGH FWD
									X	D407-667-205	CROSSTUBE INSTALLATION, 407 HIGH AFT
1				1						D206-667-141	CROSSTUBE ASSEMBLY, 206A/B HIGH FWD
2					1					D206-667-241	CROSSTUBE ASSEMBLY, 206A/B HIGH AFT
3						1				D206-667-143	CROSSTUBE ASSEMBLY, 206L/L-1/L-3/L-4 HIGH FWD
4							1			D206-667-243	CROSSTUBE ASSEMBLY, 206L/L-1/L-3/L-4 HIGH AFT
5								1		D407-667-145	CROSSTUBE ASSEMBLY, 407 HIGH FWD
6									1	D407-667-245	CROSSTUBE ASSEMBLY, 407 HIGH AFT
10				*2	*2	*2		*2		D2891-1	SUPPORT
11							*2			D2892-1	SUPPORT
12									*1	D2894-1	SUPPORT
13				*2	*2	*2		*2		D2856-400-694	ABRASION STRIP
14							*2		*2	D2856-400-773	ABRASION STRIP
15									*1	D2856-600-851	ABRASION STRIP
16				*4	*4	*4		*4		MS21920-20	CLAMP
17							*4		*4	MS21920-22	CLAMP
18									*2	MS21920-24	CLAMP
19				4	4	4		4		AN5-32A	BOLT
20							4		4	AN5-34A	BOLT
21				4	4	4	4	4	4	MS21042L5	NUT (OR MS21042-5)
22				8	8	8	8	8	8	AN960JD516	WASHER
23									*2	D3190-1	CHAFING SHIELD
30	8									AN4-6A	BOLT
31	8									AN4-7A	BOLT
32	16									AN960JD416	WASHER
33	2									D3193-041	SPACER BLOCK ASSEMBLY
40		2		*2		*2	*2	*2	*2	D2873-043	NUT PLATE
41		2		*2		*2	*2	*2	*2	D2873-045	NUT PLATE
42			2		2					D2872-043	NUT PLATE
43			2		2					D2872-045	NUT PLATE
44		10		10		10				AN5-7A	BOLT
45		10	10		10		10	10	10	AN5-10A	BOLT
46		4	4	4	10	4		4	4	AN5-30A	BOLT
47		4					4		4	AN5-32A	BOLT
48		18	18	10	12	10	10	10	10	AN960JD516	WASHER
49		4	4		6					MS21042L5	NUT (OR MS21042-5)

*REFERENCE ONLY. PARTS ARE INCLUDED IN D206-667-141/241/143/243, & D407-667-145/245 ASSEMBLIES ABOVE

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REFERENCE ONLY

5.0 PARTS LIST

Item	Qty -011	Qty -013	Qty -015	Qty -101	Qty -201	Qty -103	Qty -203	Qty -105	Qty -205	Part Number	Description
	X									D206-667-011	SPACER BLOCK KIT
		X								D206-667-013	NUT PLATE KIT (-101/-103/-105/-203/-205)
			X							D206-667-015	NUT PLATE KIT (-201)
				X						D206-667-101	CROSSTUBE INSTALLATION, 206A/B HIGH FWD
					X					D206-667-201	CROSSTUBE INSTALLATION, 206A/B HIGH AFT
						X				D206-667-103	CROSSTUBE INSTALLATION, 206L/L-1/L-3/L-4 HIGH FWD
							X			D206-667-203	CROSSTUBE INSTALLATION, 206L/L-1/L-3/L-4 HIGH AFT
								X		D407-667-105	CROSSTUBE INSTALLATION, 407 HIGH FWD
									X	D407-667-205	CROSSTUBE INSTALLATION, 407 HIGH AFT
1				1						D206-667-141	CROSSTUBE ASSEMBLY, 206A/B HIGH FWD
2					1					D206-667-241	CROSSTUBE ASSEMBLY, 206A/B HIGH AFT
3						1				D206-667-143	CROSSTUBE ASSEMBLY, 206L/L-1/L-3/L-4 HIGH FWD
4							1			D206-667-243	CROSSTUBE ASSEMBLY, 206L/L-1/L-3/L-4 HIGH AFT
5								1		D407-667-145	CROSSTUBE ASSEMBLY, 407 HIGH FWD
6									1	D407-667-245	CROSSTUBE ASSEMBLY, 407 HIGH AFT
10				*2	*2	*2		*2		D2891-1	SUPPORT
11							*2			D2892-1	SUPPORT
12									*1	D2894-1	SUPPORT
13				*2	*2	*2		*2		D2856-400-694	ABRASION STRIP
14							*2		*2	D2856-400-773	ABRASION STRIP
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16				*4	*4	*4		*4		MS21920-20	CLAMP
17							*4		*4	MS21920-22	CLAMP
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19				4	4	4		4		AN5-32A	BOLT
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22				8	8	8	8	8	8	AN960JD516	WASHER
23									*2	D3190-1	CHAFING SHIELD
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31	8									AN4-7A	BOLT
32	16									AN960JD416	WASHER
33	2									D3193-041	SPACER BLOCK ASSEMBLY
40		2		*2		*2	*2	*2	*2	D2873-043	NUT PLATE
41		2		*2		*2	*2	*2	*2	D2873-045	NUT PLATE
42			2		2					D2872-043	NUT PLATE
43			2		2					D2872-045	NUT PLATE
44		10		10		10				AN5-7A	BOLT
45		10	10		10		10	10	10	AN5-10A	BOLT
46		4	4	4	10	4		4		AN5-30A	BOLT
47		4					4		4	AN5-32A	BOLT
48		18	18	10	12	10	10	10	10	AN960JD516	WASHER
49		4	4		6					MS21042L5	NUT (OR MS21042-5)

*REFERENCE ONLY. PARTS ARE INCLUDED IN D206-667-141/241/143/243, & D407-667-145/245 ASSEMBLIES ABOVE

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Revision: C

Date: 05.07.26

52860

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



LIQUID PENETRANT TEST REPORT

P. 15307

PAGE 1 OF 1

CLIENT: DAVE AGNES PAPER L.L.C. DATE: NOV 5 2009 TIME: AM PM

ATTENTION: ALONSO JORWTEL ACUREN JOB NO.: 108-09-001633

ADDRESS: 1270 ABERDEEN ST POWO NO.: 10711

ARKES BAY ONT WORK LOCATION: 1545P ABERDEEN ST

K6H 3K7 ACCEPTANCE STD.: ASTM 1417 REV. DATE: 2007

PROJECT: F.P.T. ON CROSS TUBES

ITEM(S) EXAMINED: 10 UNITS

JOB DESCRIPTION: WET FLUORESCENT LIQUID PENETRANT INSPECTION PROCEDURE NO.: LT-0002 REV. DATE: 1/00 TECHNIQUE NO.: LT-0002 REV. DATE: 1/00

PART NO.: --- MATERIAL: ALUMINUM THICKNESS: ---

SCOPE: WET FLUORESCENT LIQUID PENETRANT INSPECTION

CARRIED OUT 100% EXTERNAL

TEST DETAILS

METHOD: ☒ FLUORESCENT ☐ VISIBLE ☐ WATER WASH ☐ SOLVENT REMOVAL ☐ POST EMULSIFIER

FAMILY BRAND: MALCOLM BLACK LIGHT S/N: 1059 ☐ OUTPUT > 1000 μ W/cm² ☐ AMBIENT < 2 fc

PENETRANT: FLUO 7 MINIMUM DWELL TIME: 15 MIN. LIGHTING EQUIP.: ☐ FLASHLIGHT ☐ TROUBLELIGHT ☐ OUTPUT > 100 fc @ SURFACE

PENETRANT REMOVER: H2O MINIMUM DRY TIME: >10 MIN. OTHER: LASINO

DEVELOPER: SD 52 MINIMUM DWELL TIME: 10 MIN. LIGHT METER S/N: --- CAL DUE DATE: 8.07

DEVELOPER TYPE: ☒ NON AQUEOUS ☐ AQUEOUS ☐ DRY

TEST SURFACE

SURFACE CONDITION: ☐ AS GROUND ☐ AS WELDED ☐ MACHINED ☐ SHOT BLASTED ☐ CLEAN BARE METAL

SURFACE TEMPERATURE: ☐ < -4°C/20°F ☐ -4°C/20°F TO 10°C/50°F ☒ 10°C/50°F TO 52°C/125°F ☐ > 52°C/125°F

RESULTS- (<input type="checkbox"/> METRIC <input type="checkbox"/> IMPERIAL)		ACCEPT	REJECT
ITEM	COMMENTS		
1	CROSS TUBE, W.O. 51935	/	
1	CROSS TUBE, W.O. 51936	/	
1	CROSS TUBE, W.O. 53314	/	
1	CROSS TUBE, W.O. 53315	/	
1	CROSS TUBE, W.O. 52970	/	
1	CROSS TUBE, W.O. 52971	/	
1	CROSS TUBE, W.O. 52859	/	
1	CROSS TUBE, W.O. 52860	/	
1	CROSS TUBE, W.O. 52972	/	
1	CROSS TUBE, W.O. 52973	/	

Scope of Services: The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the customer/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibility of the customer/operator and the customer/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care: In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES

CLIENT REPRESENTATIVE: Jan Tiley SIGNATURE: [Signature] DTR #: E-05848

TECHNICIAN (SIGNATURE): [Signature] REPORT REVIEWED BY: [Signature]

NAME (PRINT): Mike Sullivan NAME: --- INITIALS: ---

CGSB Level: 1 SNT Level: 1 CGSB Level: 2 SNT Level: ---

CGSB REG. NO.: 6006 CGSB REG. NO.: ---

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PT Sept 2001